

WHAT IS CLAIMED IS

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1. A communication apparatus comprising:

a semiconductor DAA having a line control  
unit connected to a communication line network and a  
serial IF unit connected to the line control unit  
10 via an isolating circuit, the semiconductor DAA  
controlling the communication line network and  
transmitting and receiving data;

a modem for modulating and demodulating  
the transmitted and received data; and

15 a system unit for controlling the  
semiconductor DAA and the modem, wherein:

the line control unit includes a line  
current detector for detecting a line current, and a  
line voltage detector for detecting a line voltage;  
20 and

the system unit obtains line impedance  
based on the line current and the line voltage, and  
adjusts a transmission level of the modem in  
accordance with the obtained line impedance.

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2. The communication apparatus as claimed  
5 in Claim 1 wherein,

the system unit determines whether the  
line current detected by the line current detector  
is within a predetermined range, and notifies a user  
of a line failure if the line current is not within  
10 the predetermined range.

15 3. The communication apparatus as claimed  
in Claim 1 wherein,

the system unit determines whether the  
line voltage detected by the line voltage detector  
is within a predetermined range, and notifies a user  
20 of a line failure if the line voltage is not within  
the predetermined range.

4. The communication apparatus as claimed  
in Claim 1 wherein,

the line current detector and the line  
voltage detector start to detect the line current  
5 and the line voltage, respectively, in response to a  
detection start signal from the system unit.

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5. A communication apparatus comprising:

a semiconductor DAA having line  
controlling means connected to a communication  
line network and serial IF means connected to  
15 the line controlling means via an isolating  
circuit, the semiconductor DAA controlling the  
communication line network and transmitting and  
receiving data;

modem means for modulating and  
20 demodulating the transmitted and received data;  
and

a system unit for controlling the  
semiconductor DAA and the modem means, wherein:  
the line controlling means include line  
25 current detecting means for detecting a line current,

and line voltage detecting means for detecting a  
line voltage; and

the system unit obtains line impedance  
based on the line current and the line voltage, and  
5 adjusts a transmission level of the modem means in  
accordance with the obtained line impedance.

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6. The communication apparatus as claimed  
in Claim 5 wherein,

the system unit determines whether the  
line current detected by the line current detecting  
15 means is within a predetermined range, and notifies  
a user of a line failure if the line current is not  
within the predetermined range.

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7. The communication apparatus as claimed  
in Claim 5 wherein,

the system unit determines whether the  
25 line voltage detected by the line voltage detecting

means is within a predetermined range, and notifies a user of a line failure if the line voltage is not within the predetermined range.

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8. The communication apparatus as claimed in Claim 5 wherein,

10           the line current detecting means and the line voltage detecting means start to detect the line current and the line voltage, respectively, in response to a detection start signal from the system unit.

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9. A method for adjusting a transmission  
20 level of a modem in a communication apparatus comprising: a semiconductor DAA having a line control unit connected to a communication line network and a serial IF unit connected to the line control unit via an isolating circuit, the  
25 semiconductor DAA controlling the communication line

network and transmitting and receiving data; the  
modem for modulating and demodulating the  
transmitted and received data; and a system unit for  
controlling the semiconductor DAA and the modem, the  
5 method comprising the steps of:  
    detecting a line current with a line  
current detector in the line control unit;  
    detecting a line voltage with a line  
voltage detector in the line control unit;  
10      obtaining line impedance based on the line  
current and the line voltage with the system unit;  
and  
    adjusting the transmission level of the  
modem in accordance with the obtained line impedance.  
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